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A STUDY OF ORGANIZATIONAL EFFECTIVENESS  
AND ITS PREDICTORS

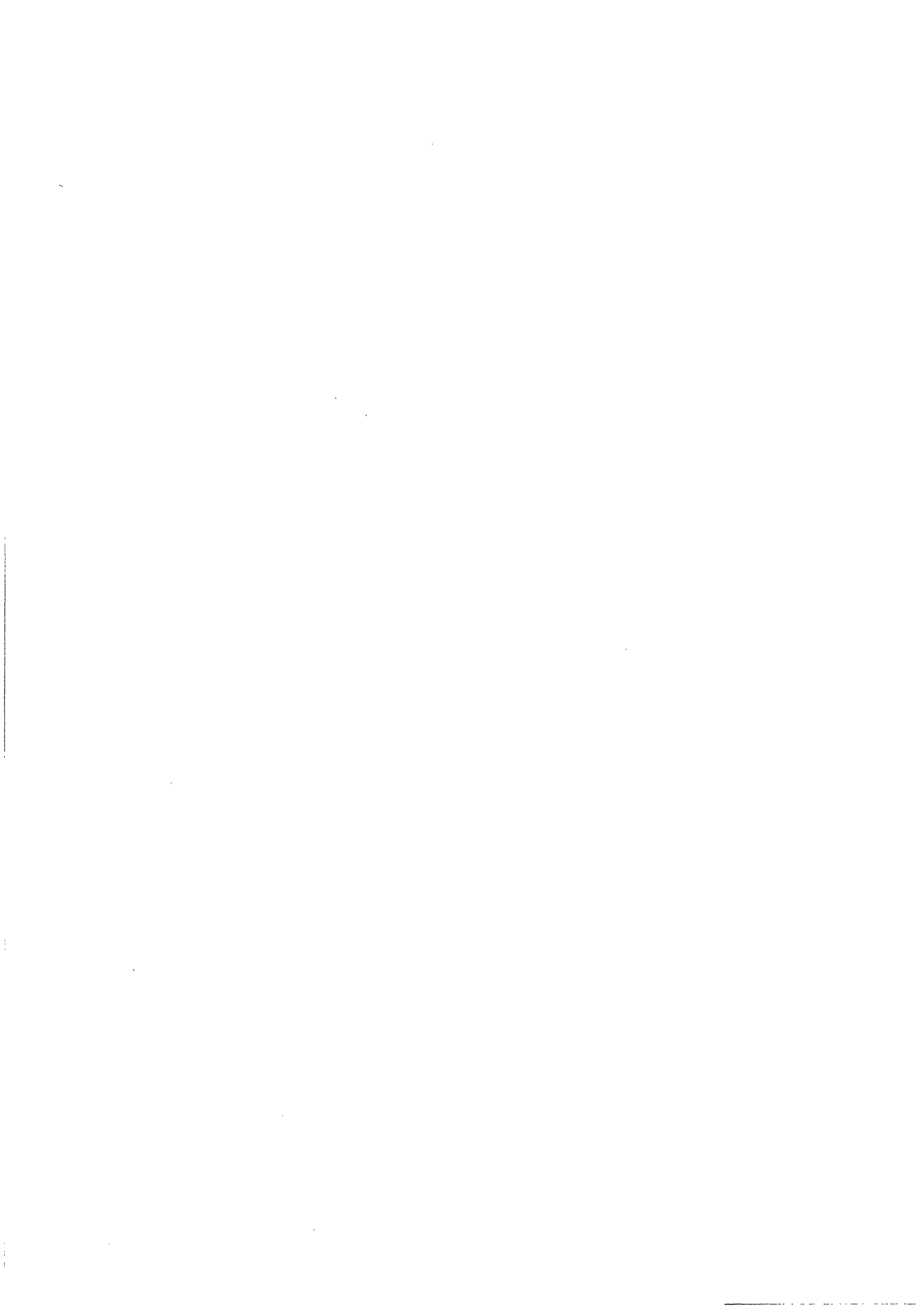
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## A STUDY OF ORGANIZATIONAL EFFECTIVENESS AND ITS PREDICTORS

### Abstract

Some authors have argued that research on organizational effectiveness should cease. This study demonstrates why organizational effectiveness studies are crucial in certain types of organizations, and it points out how many of the weaknesses and criticisms of past investigations can be addressed. The results of this study of 29 organizations indicate that certain managerial strategies are strongly associated with high static scores and with improving effectiveness over time. Managerial strategies, in fact, were found to be more important than structure, demographics, finances, and other factors. Proactive strategies and those with an external emphasis are more successful than internal and reactive strategies. Managerial strategies that are multi-faceted are more likely to lead to effectiveness than monolithic strategies.

A STUDY OF ORGANIZATIONAL EFFECTIVENESS AND ITS PREDICTORS

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## A STUDY OF ORGANIZATIONAL EFFECTIVENESS AND ITS PREDICTORS

Recently, Goodman, Atkin, and Schoorman (1983) called for a moratorium on traditional studies of organizational effectiveness. They argued that the empirical literature to date has been mostly inadequate in helping to understand the effectiveness of organizations. A completely different kind of research is needed, in their view, if organizational performance is to be comprehended.<sup>1</sup> Four main problems of the literature were discussed by these authors: (1) inadequacy in identifying indicators of effectiveness, (2) over-reliance on single indicators of effectiveness and ignoring the relationships among multiple indicators, (3) under-specified models and ignoring the time frame of the criterion variable, and (4) over-generalization to dissimilar organizations or subunits. Other writers have similarly criticized the literature on effectiveness labeling it "in conceptual disarray" (Connolly, Conlon, and Deutsch, 1980), and "in a chaotic state of affairs" (Nord, 1983). Moreover, others have also joined in the call for an abolition of effectiveness research in the organizational sciences (e.g., Hannan and Freeman, 1977).

One purpose of this paper is to point out why studies of organizational effectiveness are needed, especially in certain types of organizations, and also to illustrate by means of an empirical study of effectiveness how the objections of Goodman and his colleagues to the empirical literature can be addressed.

### Assessing Organizational Effectiveness

Numerous problems of assessing organizational effectiveness have been discussed elsewhere (see Cameron and Whetten, 1983). They include the fact that different approaches to assessing effectiveness are products of different arbitrary models of organizations; the fact that the construct space of

effectiveness has never been bounded; the fact that effectiveness is a product of individual values and preferences, and therefore the best criteria for assessing effectiveness cannot be identified; and the fact that all relevant criteria of effectiveness have never yet been identified. However, these assessment problems and theoretical issues are largely the concern of researchers, not of managers or the lay public. That is, members of the public are required frequently to make judgments about the effectiveness of organizations as they make choices concerning where to send their children to school, where to save (or invest) their money, where to seek hospital care, where to have their car repaired, which voluntary organization to join, where to pursue employment, and so on. Organizational effectiveness is not the only consideration in these kinds of judgments, of course, but it is invariably part of the judgment equation.

It is also true that individuals will make these judgments regardless of the criteria available to them. When primary or direct indicators of effectiveness are not readily apparent (e.g., how well students get educated at a university) secondary or easily accessible indicators will be readily substituted (e.g., the attractiveness of the campus) (see Whetten, 1981). Individuals, in other words, will always find a rationale for their judgments of effectiveness (Nisbet and Wilson, 1977; Bern, 1967), it is just that the rationale may have little or no relationship to organizational performance.

Researchers, on the other hand, are less willing to accept any arbitrary criteria of effectiveness in their assessments, so they struggle to identify indicators that can be measured reliably, that relate to organizational performance (i.e., the indicators possess validity), and that may have some theoretical utility. Much debate continues in the literature regarding which are the best criteria (for example, see Cummings, 1983; Schneider, 1983;

Weick and Daft, 1983). In some kinds of organizations, however, researchers face a more troublesome criteria problem than in other kinds of organizations. They are less able to find reliable and valid criteria. For example, criteria of effectiveness are especially ambiguous in organizations that do not have clearly defined goals (therefore, the goal model of effectiveness [Campbell, 1977; Scott, 1977] is not applicable), that are so loosely coupled that acquired resources have little, if any, direct connection with the organization's products (therefore, the system resource model of effectiveness [Yuchtman and Seashore, 1967; Pfeffer and Salancik, 1978] has limited usefulness), that can ignore the demands of many strategic constituencies and still survive (therefore, the multiple constituencies model [Connelly, et al., 1980; Zammuto, 1982] has little utility), and so on. Judgments of effectiveness are less consensual and more individualistic in these kinds of organizations, and therefore, the meaning of effectiveness is less clear (see Weick, 1976; March and Olsen, 1976). While in some organizations agreement can be reached about what constitutes high levels of effectiveness (e.g., profitability in an industry), in other organizations such agreement is lacking, and it is not clear what constitutes optimal performance.

#### Effectiveness in Higher Education

This condition of ambiguity regarding what constitutes effective performance is characteristic of colleges and universities. These organizations not only are typified by an absence of measurable goals, loose coupling, little direct connection between acquired resources and products, an ability to ignore major constituencies, and so on (Cameron, 1978, 1980), but they have a tradition of resistance to assessments of effectiveness that have kept consensual criteria of effectiveness from emerging. Colleges and universities argue

ferently that they are unlike other types of organizations, and therefore that traditional approaches to assessment are not applicable (March and Olsen, 1976; Weick, 1976). The uniqueness of each institution is also argued to make comparative assessments among schools questionable (Dressel, 1971). Whereas judgments about college and university effectiveness must occur regularly by accreditation agencies, potential students and faculty members, parents, funders, and employers, no good criteria of effectiveness have ever been identified, and the meaning of effectiveness in higher education is unclear (Hutchins, 1965). It is not that attempts haven't been made to identify criteria, it is just that the indicators of effectiveness selected by researchers have brought little clarity to the construct.

For example, Webster (1981) identified the six most prevalent methods of evaluating effectiveness in higher education over the past 20 years. The most prominent is the use of "reputational ratings" by peers or experts (e.g., faculty members, deans, senior scholars, corporate executives). Reputational ratings are produced by asking respondents to list the five best (most effective, highest quality, etc.) institutions or departments. Besides being subject to time lag, halo effect, and oversimplification, the weakness of this reputation criterion is best illustrated by a study conducted in 1980 asking senior personnel executives in leading organizations to rate the 12 best undergraduate business programs in America. Harvard, Stanford, Columbia, Chicago, and Northwestern all were rated as among the 12 best, even though none of these schools even has an undergraduate business program (Webster, 1981).

A second prevalent criterion of effectiveness is citation counts of faculty members in institutions. This criterion is not only subject to problems of the relative popularity of disciplines, the teaching orientation



of the school, the inability to assess quality of articles published, and so on, but an important weakness is illustrated by a study in 1977 rating psychology departments on the basis of number of articles published (Cox and Catt, 1977). Harvard's psychology department--including B. F. Skinner, Robert Bales, Roger Brown, Jerome Bruner, David McClelland, Gerome Kagan, and Richard Herrnstein--was rated 28th best, behind schools such as Temple, Rochester, and Missouri. Most knowledgeable psychologists would question the validity of such an assessment.

The other four most prevalent criteria used to rate effectiveness in colleges and universities include faculty awards and honors (e.g., Fullbright or Guggenheim fellowships), student achievements after graduation (e.g., starting salaries, listings in Who's Who...), scores of entering students on national exams (e.g., SAT, ACT), and institutional resources (e.g., size of the library, expenditures per student). In each case, major flaws are associated with each of these criteria, the most important of which is that they apply only to 50 or so of the best known institutions in the country. Schools that do not pursue a national reputation, that do not compete in a national labor market, that do not emphasize or reward research and publication by the faculty, that emphasize meeting local community needs, or that do not engage in nationally visible activities (e.g., division 1 football) never score high on such criteria. Unfortunately, the group of institutions for which these six criteria don't apply compose over 95 percent of the colleges and universities in America. Aside from the few schools with high visibility and traditions of academic excellence, most institutions of higher education are left without obvious criteria to assess their organizational effectiveness.

The result is that individualistic impressions, or judgments made on the basis of questionable criteria, are typical of assessments of effectiveness

in institutions. And without systematic and rigorous assessments in these organizations, there is little information available about how to improve performance. The effectiveness of a college or university cannot be improved, in other words, if it is not clear what effectiveness is. One reason that the call for a moratorium on studies of effectiveness is not appropriate for this kind of organization, therefore, is that no valid, univariate indicators are available, and the management of institutions of higher education suffers from this lack of understanding about appropriate performance. As Bennis (1976) put it:

Unquestionably, universities are among the worst managed institutions in the country. Hospitals and some state and city administrations may be as bad; no business or industry except Penn Central [which subsequently went bankrupt] can possibly be. One reason, incredibly enough, is that universities--which have studied everything from government to Persian mirrors and the number 7--have never deeply studied their own administration [pp. 25-26].

It is the intent of this paper to address this dearth of research on the effectiveness of colleges and universities as well as to address some of the major problems with past effectiveness studies as enumerated by Goodman and his colleagues. That is, the focus is on assessing and predicting the organizational effectiveness of colleges and universities, and doing it in such a way that many of the weaknesses of past investigators are addressed.

### Research Questions

It is to be expected that without clarity concerning the measurement of organizational effectiveness, no theories are available regarding what factors are most powerful in predicting or explaining effectiveness, and what factors are associated with improvement in effectiveness. This is particularly true

in higher education. Not only have attempts to assess organizational effectiveness been problematic, but almost no consideration has been given to identifying factors that may help guide managers of these institutions in understanding or improving their own effectiveness. In this research, four main research questions are considered that help address this deficiency. They are not derived from existing theory (since none is available), rather they are identified only as guides to understanding organizational effectiveness in higher education and in knowing how to improve it. The four questions are:

1. Can institutional effectiveness be assessed in such a way as to be associated with indicators of long-term organizational viability (i.e., can external validity be demonstrated)?
2. What factors are most predictive of organizational effectiveness in colleges and universities?
3. What factors account for improvement in effectiveness over time?
4. In what ways do institutions that improve in effectiveness over time differ from those that decline in effectiveness?

The intent of these questions is not to develop a theory of organizational effectiveness as a result of one study, rather it is to begin to address some of the deficiencies in the literature on effectiveness and on higher education assessments. For example, the first question is posed as a direct response to the criticism of Goodman et al. (1983) and others (Cameron, 1978; Campbell, 1977; Reimann, 1982) that the relationship between the criteria selected to assess effectiveness and actual success in performance, or long-term viability, often is not obvious. As Goodman et al., put it, "the relationship between indicators and OE is not examined (p. 171)." By answering this first question,

assurance can be provided that what is being measured does, in fact, have some relationship to successful long term organizational performance.

The second question is posed as a reaction to the lack of understanding regarding why some institutions are more effective than others. Especially among "lesser known" institutions of higher education that never make the reputational rating lists (for example, Cartter, 1966), it is not clear what factors are most important in explaining their effectiveness or lack thereof.

The third question results from an interest in looking at more than one static assessment. If some institutions improve or decline in various aspects of effectiveness over time, what is it that accounts for those changes? Some factors may be uncovered that are of interest to those charged with improving the effectiveness of their own colleges and universities.

The fourth question is an elaboration of question 3. Aside from the factors that help explain improvement or decline in certain aspects of effectiveness, are some institutions more likely to improve (or decline) than others? This question focuses on the factors that serve to differentiate institutions on the way up from those on the way down relative to overall effectiveness.

In the section below, the procedures for assessing organizational effectiveness are explained, and the factors that serve as potential predictors relative to the four research questions are specified.

#### METHODOLOGY

This study reports an elaboration and extension of earlier research reported by Cameron (1978, 1981, 1982). In that earlier research, organizational effectiveness was assessed in a sample of 41 colleges and universities in the northeast United States in 1976. The current study used the same

instrument to measure effectiveness four years later (1980) in 29 of the same 41 schools. In this follow-up research, only 29 of the original 41 schools agreed to participate. No apparent systematic bias was evident among those institutions. Similar institutional demographics (e.g., unionized versus non-unionized, public versus private, large versus small, doctoral versus four-year only) and similar effectiveness profiles (e.g., high scorers in different domains of effectiveness, see Cameron [1981]) were present in both samples.

#### Institutional Sample

Each of the 29 institutions included in the 1980 study are four-year institutions. Seven of the schools offer only bachelors degrees, five offer masters degrees, and 17 offer doctorates. Eleven of the schools are publicly supported and 18 are private. Institutional age ranges from approximately 30 years to over 200 years. Faculties are unionized in 19 of the schools with 10 being non-unionized. Undergraduate student enrollments range from just over 1,000 to just over 10,000 with the average being 4,200 students. Confidentiality was promised to each institution, so names of schools are not included in this report.

#### Respondent Sample

In each of the sample institutions, approximately 75 representatives of the dominant coalition were asked to respond to a questionnaire. Forty-nine percent of the respondents were faculty department heads, the rest were academic, financial, student affairs, and general administrators. In all, 1,240 individuals participated in the data collection effort in 1980 (1,317 participated in the earlier 1976 study), representing a response rate of 60 percent of those contacted.

Instrument

The questionnaire consisted of items identified by members of the dominant coalition as indicating organizational effectiveness in colleges and universities. These indicators were obtained from an earlier study of dominant coalition members in another sample of institutions by means of interviews. Respondents in those interviews were asked to identify characteristics that are typical of effective institutions with which they were familiar. A long list of potential indicators was identified. From those characteristics, questionnaire items were constructed to be included on the effectiveness instrument (see Cameron, 1978, for a more detailed explanation). Items on the questionnaire asked individuals to provide descriptive information, not evaluative judgments, regarding the extent to which their institution possessed certain characteristics. Although these characteristics had been identified as being indicative of effectiveness, questionnaire respondents were not instructed that they were rating effectiveness. They were only told that they were to describe the characteristics possessed by their institution.<sup>2</sup> This emphasis on description, not evaluation, is important in order to reduce the likelihood that respondents would purposely bias evaluations of their own organization's effectiveness in a positive direction. This questionnaire is designed to assess nine separate dimensions of organizational effectiveness, and these dimensions are summarized in Table 1.

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Table 1 About Here  
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Boundaries of the Effectiveness Construct

Cameron and Whetten (1983) suggest that in every assessment of effectiveness, but particularly in assessments in settings that have some degree of

TABLE 1

Nine Dimensions of Organizational Effectiveness  
in Institutions of Higher Education

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DIMENSION	DEFINITION
1. Student Educational Satisfaction	The extent to which students are satisfied with their educational experiences at the institution.
2. Student Academic Development	The extent of the academic growth, attainment, and the progress of students at the institution.
3. Student Career Development	The extent of occupational preparedness of the students, and the emphasis on career development provided by the institution.
4. Student Personal Development	The extent of student development in nonacademic, noncareer oriented areas, and the emphasis on personal development provided by the school.
5. Faculty and Administrator Employment Satisfaction	The extent of satisfaction of faculty members and administrators with their employment at the institution.
6. Professional Development and Quality of the Faculty	The extent of professional attainment and development of the faculty, and the emphasis on development provided by the institution.
7. System Openness and Community Interaction	The extent of interaction with, adaptation to, and services provided for the external environment by the institution.
8. Ability to Acquire Resources	The ability of the institution to acquire needed resources such as high quality students and faculty, financial supports, etc.
9. Organizational Health	The extent to which the internal processes and practices in the institution are smooth functioning and benevolent.

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ambiguity regarding appropriate criteria (e.g., higher education), the construct of effectiveness must be circumscribed or bounded. That is, not all possible criteria or perspectives can be taken into account, so researchers must be explicit about what they are and are not measuring. Seven guidelines are outlined by these authors that help limit the scope of the assessment and provide boundaries to the definition. The seven guidelines are listed below along with the circumscriptions for this investigation.

GUIDELINE

CIRCUMSCRIPTION

- |                                                          |                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. From whose perspective is effectiveness being judged? | Dominant coalition members constitute the relevant perspective in this study. This group comprises the major decision makers in the institutions, and the ones that have the most influence on institutional policy, direction, and performance.                                                                   |
| 2. On what domains of activity is the judgment focused?  | The undergraduate portion of the institutions was assessed. This was selected because it is a comparable domain across all the schools, and because it comprises the major area of activity and identity for each of the institutions.                                                                             |
| 3. What level of analysis is used?                       | The organizational level of analysis was the focus. This level is important in making comparative judgments across institutions, and because it has largely been ignored in past evaluations in higher education. Moreover, none of the institutions is so large as to make institutional wide ratings infeasible. |
| 4. What is the purpose of the assessment?                | This assessment sought to identify areas of strength and weakness on various dimensions of effectiveness. Guaranteeing confidentiality for institutions helped to eliminate the threat that the assessments would be used for political or punitive purposes, and that biased data would result.                   |



<u>GUIDELINE</u>	<u>CIRCUMSCRIPTION</u>
5. What time frame is employed?	Criteria of effectiveness all were oriented toward static, short-term indicators. They focus on the extent to which the institutions currently possess characteristics indicative of high effectiveness.
6. What type of data are sought?	Perceptual ratings of effectiveness were sought by way of questionnaires.
7. What is the referent against which effectiveness is judged?	Schools were assumed to be highly effective if they scored higher on a dimension than other institutions in the sample. Therefore, a <u>comparative referent</u> was employed.

The constraints imposed on effectiveness in this investigation suggest that institutions were judged to be effective if they scored high on a variety of short-term, organization level criteria that are important to members of the dominant coalition.

### Analyses

In order to address the four research questions in this study, several kinds of statistical analyses were required. First, psychometric tests were conducted to ensure that the nine dimensions of effectiveness assessed by the questionnaire possess high reliability and internal consistency. Cameron (1981) argued that these dimensions are conceptually distinct (but not necessarily statistically independent), so it was important to determine if the nine dimensions emerged from this study. The psychometric tests included reliability analyses and factor analysis.

Second, the scores of institutions on the effectiveness dimensions were correlated with other independent indicators of institutional well-being and long-term viability. The indicators selected for these analyses were five

indicators of "financial health" (Dickmeyer, 1980), enrollment trends in the institutions from 1975 through 1982, and independent ratings of academic quality (Gourman, 1980, 1983). The rationale is that schools scoring high on dimensions of effectiveness should also be financially strong and should not be losing students. Many other factors besides effectiveness could affect these two indicators of long-term viability, of course, but it was felt that some evidence of validity for the questionnaire measures could be obtained by finding positive associations between effectiveness scores and financial health and an absence of enrollment decline. In addition, institutions scoring high on these effectiveness dimensions should also be rated highly by independent sources using independent criteria.

The analyses used to address research questions 2, 3, and 4 were multiple regression and discriminant analysis. Regressing several potentially important predictor variables on effectiveness scores was designed to determine what were the most important factors in explaining college and university effectiveness. In addition, because some institutions improved in their scores on the effectiveness dimensions between 1976 and 1980 while others declined or remained stable, predictor variables also were regressed on the change scores for each dimension of effectiveness in these institutions between 1976 and 1980. The purpose was to determine what factors account for improvement in each dimension of effectiveness over time. Finally, institutions were divided into three groups--those that improved in effectiveness (i.e., average scores on effectiveness dimensions improved at least five percent), those that remained stable on their effectiveness scores (i.e., average effectiveness scores were  $\pm$  three percent), and those that declined in effectiveness (i.e., effectiveness scores declined at least five percent). Discriminant analyses were conducted to determine what factors differentiated between institutions that were getting better from those that were getting worse.

### Predictor Variables

Variables were selected as potential predictors if they had been identified in previous research as having some relationship to institutional performance. Because this research is focused on identifying the most important predictor variables, not on testing a priori hypothesized relationships between certain variables and effectiveness, this strategy for selecting variables seemed appropriate. That is, this investigation is exploratory in the sense that no theories exist regarding what variables are supposed to be related to effectiveness in colleges and universities. Therefore, factors that have been found to be associated with performance in other types of organizations were used.

Five major factors were selected as predictors of organizational effectiveness: (1) the external environment--including turbulence, complexity, richness or munificence, and supportiveness--based on the work of Cameron (1981), Duncan (1973), Hirsch (1975), Miles and Cameron (1982), Negandhi and Reimann (1973), Nord (1983), Osborn and Hunt (1974), Pennings (1975, 1976), and others; (2) institutional structure--including centralization, professionalization, standardization, administrative ratio diversity, and saga--based on the findings of Blau (1974), Lawrence and Lorsch (1969), Mahoney (1967), Van de Ven and Ferry (1980), Clark (1970), Birnbaum (1982), and others; (3) institutional strategy--including major area of strategic orientation, proactivity of strategies, and internal versus external focus--based on Child (1974, 1975), Chandler (1977), Miles and Snow (1978), Hambrick (1983), Miles and Cameron (1982), and others; (4) institutional demographics--including size, location, unionism, percent of tenured faculty, type of school (e.g., liberal arts, major doctoral, comprehensive), institutional control (e.g., public, private) and so on--based on the work of Kemmerer and Baldrige (1978),

Cameron (1982), Pfeffer (1983), Zammuto (1982), and others; and (5) institutional finances--including internal expenditure patterns, revenues from sources such as federal and state governments and foundations, endowments, and acquisition of revenues compared to competing schools--based on research conducted by Bowen (1981), Pfeffer and Moore (1980), Chaffee (1983), and Dickmeyer (1980). Table 2 summarizes these five major predictors.<sup>3</sup>

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Table 2 About Here  
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The degree to which management action is associated with successful organizational performance--as opposed to uncontrollable factors such as environment, structure, and institutional demographics--is a much debated issue in current organizational research (Aldrich, 1979; Miles and Cameron, 1982) so special emphasis was given to comparisons between these controllable and uncontrollable factors.

## RESULTS

### Dimensions of Effectiveness

The same nine dimensions of effectiveness emerged from this study as have emerged in past research. Internal consistency reliabilities for these dimensions ranged from .72 to .92 with a mean reliability coefficient of .82. Factor analysis (orthogonal rotation) of the 57 questionnaire items resulted in the items for each dimension loading on their own factors. (Detailed reporting of these factor loadings is not included to conserve space.) Average intercorrelation among the nine dimensions was .42 indicating that, whereas the dimensions are conceptually distinct, certain of the dimensions do vary together in ratings of effectiveness (see Cameron [1981] for an analysis of the

TABLE 2

Major Predictors of Organizational Effectiveness  
Used in This Research

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<u>Institutional Demographics</u>	<u>Institutional Strategy</u>
1-institutional type	1-oriented toward academics & scholarship
2-age	2-oriented toward finances & budgeting
3-presence of a union	3-oriented toward legal matters
4-student-faculty ratio	4-oriented toward student affairs
5-percent tenured faculty	5-oriented toward fund raising
6-percent in-state students	6-oriented toward public service
7-selectivity of students	7-oriented toward public relations
8-total enrollments	8-oriented toward proactivity
9-institutional control	9-oriented toward internal concerns

<u>Institutional Structure</u>	<u>Institutional Finances</u>
1-centralization	1-revenues from several sources
2-formalization	2-total revenues
3-professionalization	3-expenditures in several areas
4-administrative ratio	4-endowment
5-saga	5-revenue acquisition relative to others
6-diversity of programs	6-expenditures per student
	7-revenue stability

<u>External Environment</u>
1-supportiveness
2-munificence
3-complexity
4-turbulence

---

interdimensional covariance). These results indicate that the nine dimensions of organizational effectiveness have adequate internal consistency reliability and discriminant validity to be used as the basis for the institutional performance profiles. An examination of the mean scores of each of the 29 institutions across the nine dimensions showed that each school had a unique profile of effectiveness scores, and no school scored high (or low) on all the dimensions of effectiveness.

#### Associations of Dimensions with Other Effectiveness Indicators

Researchers have too frequently selected criteria of effectiveness arbitrarily or on the basis of convenience, and they have not often demonstrated relationships between those criteria and longer-term performance. (A recent example of an exception to this shortcoming is Reimann, 1982.) It is important, however, to determine to what extent the criteria of effectiveness used in assessments are associated with other indicators of longer-term viability and performance. This is essentially a question of external validity. Cameron (1978) reported correlations between scores on these nine dimensions and certain objective measures of performance, but few of those objective indicators were long-term in orientation. Similarly, Cameron (1978b) reported the results of a multitrait-multimethod analysis with the nine dimensions and demonstrated the acceptability of the discriminant validity of these dimensions. However, Goodman, Atkin, and Schoorman (1983) still raised questions about the appropriateness of these measures of effectiveness in arguing, "It is not clear how the objective data maps onto OE...there may be confusion as to whether the nine dimensions are clearly measures of OE... (p. 170, 171)."

Evidence for the external validity of these nine dimensions may be observed by analyzing the relationships between scores on the dimensions and

indicators of institutional financial health, between the dimension scores and enrollment trends, and between dimension scores and independent ratings of effectiveness. Francis (1982), Dickmeyer (1980), Dickmeyer and Hughes (1982), Minter (1980) and others have argued that long-term institutional viability is strongly related to financial health, and considerable effort has been extended to develop measures of that construct. Whereas no consensus has been reached regarding which are the best measures of financial health for institutions of higher education, the five indicators included in Table 3 are generally acknowledged to be among the best alternatives. Table 3 reports average correlations between scores on the nine effectiveness dimensions with scores on five financial indicators for the 29 institutions for the years 1976 and 1980.<sup>4</sup> Two years are reported in the table (concurrent and future financial health) to provide evidence that the relationship between effectiveness and financial health is not a product of a halo effect (i.e., lots of money available does not cause respondents to positively bias their ratings of effectiveness).

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Table 3 About Here  
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Correlations are averaged across each of the financial indicators in the top half of the table to provide an average correlation between each dimension of effectiveness and overall financial health. Six of the nine dimensions are significantly and positively associated with financial health for the sample schools in both years. In the bottom half of the table, correlations are averaged across the nine dimensions of effectiveness for each of the five financial indicators. All five are significantly correlated with overall organizational effectiveness in both years. The canonical correlation

TABLE 3

Correlations Between Effectiveness Dimensions  
and Financial Health Scores for 1976 and 1980

EFFECTIVENESS DIMENSION	AVERAGE CORRELATION	
	1976	1980
Student Educational Satisfaction	.488*	.402*
Student Academic Development	.802**	.722**
Student Career Development	-.561**	-.695**
Student Personal Development	.396*	.383*
Faculty & Administrator Employment Satisfaction	.244	.164
Professional Development & Quality of the Faculty	.806**	.761**
System Openness & Community Interaction	.055	.103
Ability to Acquire Resources	.783**	.761**
Organizational Health	.471*	.299

FINANCIAL HEALTH INDICATOR	AVERAGE CORRELATION	
	1976	1980
Financial Independence	.377*	.370*
Financial Flexibility	.518**	.533**
Financial Cushion	.532**	.369*
Revenue Drawing Power	.590**	.545**
Endowment Yield	.542**	.486**

YEAR	CANONICAL COEFFICIENT	CHI SQUARE	SIGNIFICANCE
1976	.984	106.72	.000
1980	.964	88.89	.000

\* p < .01  
\*\* p < .001



coefficient between these two sets of variables is .98 in 1976 and .96 in 1980, and approximately 99 percent of the variance is accounted for in both years.

A more fine-grained way to analyze the relationship between financial health and effectiveness is to compare the financial health of the schools scoring lowest on effectiveness with those scoring highest on effectiveness. Seven of the ten schools that had the highest overall average scores on the nine dimensions of effectiveness also had the highest scores on all five of the financial health indicators. In fact, the top seven schools in overall effectiveness also were the top seven schools on each indicator of financial health (although the rank orderings on each of the financial indicators were not always the same). Similarly, the institutions that scored lowest on the nine dimensions of effectiveness also tended to score low on the financial health indicators. Nine of the bottom ten schools in overall effectiveness also ranked in the bottom ten on at least three of the five financial health indicators.

Rank order correlations for schools' ranks on organizational effectiveness with their ranks on each of the five financial health indicators ranged between .26 ( $p < .05$ ) and .68 ( $p < .001$ ). The average rank order correlation between effectiveness and financial health is .54 ( $p < .001$ ). In summary, therefore, these product-moment correlations and rank order correlations provide support for the external validity of the nine effectiveness dimensions, and they provide some indication that financial viability is associated with effectiveness scores for the institutions.

A second potential indicator of long-term institutional viability is the pattern of enrollments experienced by schools. If institutions are losing enrollments, it may indicate that long-term survival is threatened or that the institution is not as effective as it could be. Of course, numerous other

factors have a significant impact on institutional enrollments such as the economy, federal student aid, unemployment rates, and so on (see Zammuto, 1983), but it is also reasonable to assume that ineffectiveness and enrollment decline may be correlated as well. Table 4 reports the correlations between enrollment change from 1975 through 1982 and scores on the nine effectiveness dimensions. Significant correlations exist for only four of the dimensions. The canonical correlation coefficient is approximately .6 ( $p < .10$ ).

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Table 4 About Here  
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More supportive evidence for external validity using these data, however, comes from comparing the ten institutions having the highest overall effectiveness scores with the ten institutions having the lowest overall scores. Only one of the top ten schools experienced enrollment decline in the period 1975 through 1982 (a drop of 3 percent), whereas seven of the bottom ten schools experienced enrollment declines (ranging from 3 percent to 94 percent).<sup>5</sup> These results seem to provide additional evidence that the nine dimensions of effectiveness are assessing important aspects of institutional performance.

A third source of validity data comes from comparisons of institutions' scores on the dimensions of effectiveness with independent ratings. Such a comparison was done using the Gourman Report (Gourman, 1980, 1983) as the referent. This report provides an "overall academic rating" of the undergraduate portion of schools based on the following criteria: "Qualifications, experience, intellectual interests, attainments, and professional productivity of the faculty; Standards and quality of instruction; Faculty research; Scholastic work of students; Curriculum; Records of graduates both in graduate

TABLE 4  
 Correlations Between Effectiveness Dimensions and  
 Enrollment Change Between 1975 and 1982

EFFECTIVENESS DIMENSION	CORRELATION
Student Educational Satisfaction	.236*
Student Academic Development	-.120
Student Career Development	.488***
Student Personal Development	-.205
Faculty & Administrator Employment Satisfaction	.387***
Professional Development & Quality of the Faculty	-.050
System Openness & Community Interaction	.337**
Ability to Acquire Resources	.120
Organizational Health	.201

CANONICAL CORRELATION COEFFICIENT	CHI SQUARE	SIGNIFICANCE
.598	34.66	.10

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

study and in practice; Attitude and policy of administration toward all divisions and toward teaching, research, and scholarly production; Administration areas; Administration research; Non-departmental levels; and Library" (p. 4). (It is not known the specific procedures or methods employed to assess these criteria.) Correlations were computed between the "academic rating" score provided by Gourman and the average scores on the three dimensions comprising the "academic domain of effectiveness" (Cameron, 1981). That is, schools rated highly by Gourman should have high scores on the academic effectiveness dimensions. The correlation is .745 for the 1980 data, indicating substantial support for the external validity of at least the three academically oriented dimensions of effectiveness. (No 1976 ratings were produced by Gourman, so comparisons with 1976 effectiveness scores could not be done.)

In sum, evidence supports the external validity of these measures of effectiveness, and while validity cannot be conclusively proven, some confidence seems warranted in their use in higher education assessments.<sup>6</sup>

#### Predictors of Organizational Effectiveness

Goodman et al. (1983) suggested that if any faith is to be put in measures of organizational effectiveness, indicators of what factors affect them is a prerequisite. Referring particularly to the nine dimensions of effectiveness used in this study, they asserted:

The key issue, however, is that we cannot interpret variations of students' academic development [for example] as a measure of OE until we understand the controllable and uncontrollable variables that affect this dimension (p. 171).

Analyses reported in Table 5 address the need to determine factors that affect or predict organizational effectiveness. Two steps were used to generate these results.

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Table 5 About Here  
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TABLE 5

Major Predictions of Nine Dimensions of Organizational Effectiveness (Variables at the  $p < .05$  level)

DIMENSION	PREDICTOR VARIABLES	BETA	CORR.	R <sup>2</sup>
Student Education Satisfaction				
	Strategy (1-academics)	.743	.743	
	Environment (4-turbulence)	-.416	-.650	
	Strategy (5-fund raising)	.365	.699	.772
Student Academic Development				
	Demographics (7-selectivity)	.890	.890	
	Strategy (1-academics)	.322	.785	.845
Student Career Development				
	Finances (1-multiple sources)	-.671	-.671	
	Strategy (7-public relations)	.397	.508	.602
Student Personal Development				
	Strategy (4-student affairs)	.727	.727	
	Strategy (5-fund raising)	.442	.598	
	Strategy (6-public service)	-.313	.222	.776
Faculty & Administrator Employment Satisfaction				
	Environment (4-turbulence)	-.726	-.726	
	Strategy (8-proactivity)	.357	.444	.653
Professional Development & Quality of the Faculty				
	Demographics (7-selectivity)	.888	.888	
	Finances (5-revenue acquisition)	.451	.882	
	Strategy (1-academics)	.261	.755	.876
System Openness & Community Interaction				
	Strategy (8-proactivity)	.693	.693	
	Strategy (6-public service)	.523	.668	.736
Ability to Acquire Resources				
	Demographics (7-selectivity)	.942	.942	
	Strategy (8-proactivity)	.222	.650	
	Finances (5-revenue acquisition)	.244	.886	.938
Organizational Health				
	Strategy (1-academics)	.759	.759	
	Strategy (4-student affairs)	.463	.708	.734

First, because there were too many predictor variables for a single regression analysis (i.e., a degrees of freedom limitation), separate stepwise regressions were run for each major category of variables in order to identify the most powerful predictors. The most powerful predictors were then included in the final regression analysis. The results in Table 5 show the variables that have significant relationships with each effectiveness dimension at the .05 level of significance.<sup>7</sup>

These findings indicate that for every dimension of effectiveness, the strategic orientation of top management is significantly related to high scores. A strategic orientation toward academic and scholarly affairs (institutional strategy [1]), for example, is associated with high effectiveness on four dimensions--Student Educational Satisfaction, Student Academic Development, Professional Development and Quality of the Faculty, and Organizational Health. Implementing strategies proactively, instead of reactively (institutional strategy [8]), is associated with high scores on three of the dimensions--Faculty and Administrator Employment Satisfaction, System Openness and Community Interaction, and Ability to Acquire Resources. Three other strategy variables--orientation toward public service (6), student affairs (4), and fund raising (5) are associated with two effectiveness dimensions each.

Factors other than institutional strategy that hold significant relationships with effectiveness dimensions are the revenue acquisition ability of the institutions (institutional finances [5]), and the selectivity of the student-body (institutional demographics [7]) as indicated by their scores on entrance examinations such as SAT and ACT. Both of these factors are associated with high scores on the academically oriented dimensions, i.e., Student Academic Development, Professional Development and Quality of the Faculty, and

Ability to Acquire Resources. The major negative influence on organizational effectiveness comes from the external environment, where turbulence (4) is a significant negative factor in affecting two morale-oriented dimensions-- Student Educational Satisfaction and Faculty and Administrator Satisfaction.

The one surprise from these results is the relatively strong negative association between multiple financial sources (finances-1) and Student Career Development. One explanation for this finding is that the most widely dispersed (and equally dispersed) funding sources are associated with comprehensive institutions (i.e., those with multiple programs, emphases, and strengths). The most effective schools on the Student Career Development dimension, however, are frequently more specialized in their emphasis. That is, they focus on vocational-technical or professional programs. Consequently, they have a less diverse funding base. The strength of this negative relationship in Table 6 is more surprising than its direction.

In sum, dimensions of effectiveness comprising the morale domain of effectiveness (see Cameron, 1981) are most strongly associated with strategies oriented toward academics, student affairs, and external constituencies. Dimensions comprising the academic domain of effectiveness are most strongly associated with proactive strategies oriented toward external constituencies and academic affairs. Dimensions comprising the external adaptation domain of effectiveness are most closely associated with proactive, externally oriented strategies and with multiple revenue sources. Of all the categories of variables assessed, the most powerful factors associated with organizational effectiveness in these institutions of higher education tend to be those under the control of managers. That is, managers' strategic orientations, their stance toward proactivity rather than reactivity, and the quality of students they can attract are among the most influential variables in predicting to what extent the institutions score high on the effectiveness dimensions. Environmental

turbulence, a largely uncontrollable factor, appears to be the major constraint on performance.

Predictors of Change in Organizational Effectiveness

Aside from determining what factors account for high scores on these nine effectiveness dimensions, determining what factors account for improvement or decline in effectiveness scores also is important. That is, factors that are associated with high effectiveness at one point in time may be different than the factors that are associated with improving or declining effectiveness over time. Table 5 reported results that relate to maintaining high levels of effectiveness. The results reported in this section relate to changes in the level of effectiveness possessed by an institution.

As mentioned earlier, the criteria of effectiveness assessed by this instrument are short-term in orientation and static, but the instrument was administered to dominant coalition members at the same 29 institutions in 1976 and 1980. Therefore, by computing the differences between effectiveness scores in 1976 and in 1980, it becomes possible to identify improving and declining schools and to determine the factors that account for those changes. A two-stage regression procedure was used in these analyses, as was the case in predicting the static effectiveness scores in Table 5, and the results are reported in Table 6.

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Table 6 About Here  
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One of the most interesting findings from this analysis is the difference in the years when predictor variables were most powerful. (Predictors from both 1976 and 1980 were included in the analyses.) With one exception, the most powerful environmental variables all were characteristics of the 1980



TABLE 6

Predictors of Change in Nine Dimensions of Organizational Effectiveness - 1976-1980 (Variables at the  $p < .05$  level)

DIMENSION	PREDICTOR VARIABLES	BETA	CORR.	R <sup>2</sup>
Change in Student Educational Satisfaction				
	Demographics (3-faculty union)	-.434	-.434	.188
Change in Student Academic Development				
	Strategy-1976 (3-legal matters)	.547	.547	.440
	Environment-1976 (1-supportiveness)	.377	.332	
Change in Student Career Development				
	Strategy-1976 (5-fund raising)	.383	.383	.342
	Environment-1980 (3-complexity)	-.452	-.353	
Change in Student Personal Development				
	Strategy-1980 (2-budgeting)	-.414	-.414	.172
Change in Faculty & Administrator Employment Satisfaction				
	Environment-1980 (4-turbulence)	-.597	-.597	.357
Change in Professional Development & Quality of the Faculty				
	Environment-1980 (4-turbulence)	-.679	-.679	.623
	Finances-1980 (6-student expenditures)	-.297	-.286	
	Strategy-1976 (8-proactivity)	.298	.218	
Change in System Openness & Community Interaction				
	Strategy-1976 (8-proactivity)	.468	.468	.219
Change in Ability to Acquire Resources				
	Demographics (3-faculty union)	-.477	-.477	.623
	Finances-1980 (6-student expenditures)	-.541	-.411	
	Finances-1980 (5-revenue acquisition)	.787	.029	
Change in Organizational Health				
	Environment-1980 (4-turbulence)	-.509	-.509	.259

environment and all had negative relationships to improving effectiveness. The one exception was environmental supportiveness in 1976 which was positively associated with improvement in Student Academic Development. On the other hand, the most powerful strategy variables, except one, all were characteristic of the 1976 institutional strategies and were positively associated with improving effectiveness. The exception was a strategic orientation toward budgeting matters in 1980 which was negatively associated with Student Personal Development. In general, this pattern provides some evidence that managerial strategies may lead to changes in some effectiveness dimensions over time, whereas perceptions of the environment, as well as the nature of the institution's interaction with its environment, may be a product of changes in the institution's effectiveness. A closer look at the results helps to elucidate this conclusion.

Environmental turbulence in 1980 is negatively associated with improving effectiveness over time for three of the dimensions--Faculty & Administrator Employment Satisfaction, Professional Development & Quality of the Faculty, and Organizational Health. This may be a result of the environment being perceived to be more turbulent and hostile when personnel are dissatisfied, growth and development are not occurring, and the internal functioning of the system is poor. Or it might result from the environmental relations being negatively affected by decreasing effectiveness in these areas, so that in fact the environment becomes more turbulent (i.e., the institution ignores constituencies, becomes protectionistic and rigid, is dominated by crisis management, and so on. See Whetten, 1980, and Cameron, 1983). The negative association of environmental complexity with Student Career Development is also consistent with this explanation. The 1976 environmental conditions did not turn out to have strong associations with changing effectiveness over time, but it

was the 1980 environment that was most powerfully related. It appears either that the environment changed in 1980 after the change in institutional effectiveness, or else perceptions of that environment were altered.

On the other hand, institutional strategy in 1976 is associated with improving effectiveness of five different dimensions. Proactivity is associated, for example, with improvement on two dimensions--Professional Development and Quality of the Faculty, and System Openness and Community Interaction--suggesting that aggressiveness and enactment of the environment may lead to improvement in meeting faculty needs for growth and development and the demands of external constituencies in the environment. (Reactivity, on the other hand, might lead to stagnation and isolation for the institution and its faculty as was found by Cameron [1982] and Chaffee [1983].) Similarly, a strategic orientation toward fund raising is associated with improvement in Student Career Development, providing evidence for the importance of financial resources in helping to prepare students to be successful in the job market (Livingston, 1971; Mintzberg, 1976). It is more difficult to interpret the relationship of a strategic emphasis on legal matters and improvement in Student Academic Development. While the relationship is clearly a strong one, legalism in an institution is often associated with grievances, law suits, and violations of institutional rules. These kinds of activities would not seem to contribute to enhanced student development. Another way to interpret a strategic orientation on legal matters, however, is to equate it with activities such as protecting the institution from external (e.g., federal government) encroachment, the pursuit of Title 3 grants, the enforcement of strict academic or behavioral standards, and so forth. These kinds of actions, which might be labelled legalistic, may have a closer relationship to improvement of academic development at an institution. Unfortunately, because of an absence of qualitative or interview data, a conclusive interpretation of the role of legalistic

strategies is difficult to make. The one strategy that is negatively associated with improvement in effectiveness is typical of the institution in 1980--an emphasis on budgeting. When personal development of students (e.g., extracurricular activities, cultural opportunities) decrease in number and/or quality, it often is due to budget constraints. It is reasonable to conclude therefore, that declining effectiveness on this dimension would be associated with a strategic orientation toward the resource allocation problems of an institution (i.e., budgeting).

On a theoretical level, these results provide some support for the place of strategic management in the improvement of institutional performance over time. In contrast, the natural selection model (Campbell, 1969; Hannan & Freeman, 1977; Aldrich, 1979), which emphasizes the prominence of the environment as the major determiner of organizational performance, receives little support from these data. The strategic choice model (Chandler, 1977; Child, 1972; Miles & Cameron, 1982), which emphasizes the power of managerial actions, is the most consistent of the two competing explanations of effectiveness with these findings. Factors that preceded the changes in effectiveness (1976) were mainly strategies, and they had positive effects. Factors that followed changes in effectiveness (1980) were mainly environmental variables, and they had negative effects.

Other important factors besides the environment and institutional strategies are the presence of a faculty union (institutional demographics [3]), which is associated with a decline in effectiveness on two of the dimensions, and the ratio of expenditures to students in 1980 (institutional finances [6]), which is also associated with a decline in effectiveness on two dimensions. The findings showing a negative relationship of unionism to effectiveness are consistent with earlier research on that subject (Cameron, 1982, 1984) which

showed that schools with a union tended to have lower scores on all dimensions of effectiveness than non-unionized schools. The findings relative to expenditures per student suggest that when institutions improved in effectiveness on two academically-oriented dimensions (Professional Development and Quality of the Faculty, and Ability to Acquire Resources) institutions limited spending and became more efficient. This strategy is consistent with Chaffee's (1983) research showing that schools that managed decline well, or that recovered from decline, often became "lean and mean" in their academic programs. That is, they implemented efficiency measures and became proactive in their strategies, which is consistent with spending less rather than more money per student (also see Peck, 1983). On the other hand, institutional decline in effectiveness may have triggered a subsequent increase in student expenditures, as an attempt to cope with the erosion.

In summary, the regression results in Table 6 indicate at least two general findings. First, both immutable environmental forces and managerial strategies have significant relationships with changes in organizational effectiveness--the former largely negative and the latter largely positive. This suggests that strategies may lead to positive change in effectiveness on some dimensions, but that environmental changes may be more of a result than a precursor to changes in effectiveness. Second, aside from the environment, the most negative factors related to individual dimensions of effectiveness are the presence of a faculty union and student expenditures subsequent to a period of declining effectiveness. The most positive factors are institutional strategies.

#### Differentiating Among Improving, Stable, and Declining Institutions

The fourth research question guiding this investigation focuses on the characteristics of institutions that improve in their overall effectiveness

as compared to those that remain stable or decline in effectiveness. Because managers and administrators are faced with accountability for overall organizational effectiveness, and because public judgments of colleges and universities are usually made on overall performance not specific activities, the emphasis here is on general improvement rather than on change in the individual dimensions of effectiveness. Two steps were used in differentiating among these institutions, as was the case in the previous regression analyses. That is, separate stepwise discriminant analyses were used with different categories of variables in order to identify those that were most powerful in distinguishing among the three institutional groups--improvers, decliners, and those that remained stable in effectiveness. The final discriminant analysis used only the most powerful variables. Table 7 reports the results of that analysis.

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Table 7 About Here  
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Eight variables were found to be extremely powerful in differentiating among these three groups of institutions. These eight variables accounted for almost 98 percent of the variance and resulted in 100 percent of the institutions being correctly classified as declining, stable, or improving in effectiveness. Four of the variables have positive associations with improvement in effectiveness and four have negative associations.

Institutions that improved in effectiveness between 1976 and 1980 are those that exist in a supportive external environment and that are strategically oriented toward fund raising activities in that environment. They also are major doctoral-type institutions, and, as a consequence of improving overall organizational effectiveness, have high expenditures per student. Whereas high expenditures per student are associated with lower effectiveness in Professional Development and Quality of the Faculty and with the Ability to

TABLE 7

Discriminators Among Improvers, Decliners, and Institutions  
That Remained Stable on Organizational Effectiveness Dimensions  
1976 through 1980

EIGENVALUE	CANONICAL CORRELATION	WILKS' LAMBDA	CHI SQUARE	D. F.	SIGNIFICANCE
15.31	.969	.027	70.77	24	.0000

DISCRIMINATING VARIABLES	DISCRIMINANT COEFFICIENT	CORRELATION WITH DISCRIMINANT SCORE
Demographics (1-major doctoral)	-.219	.441**
Demographics (6-in-state students)	-2.090	-.998***
Demographics (3-faculty union)	3.301	-.578***
Demographics (1-general baccalaureate)	1.684	-.134
Demographics (8-change in enrollment)	1.791	.268
Strategy 1976 (5-fund raising)	-2.888	.447**
Strategy 1976 (9-internal concerns)	-2.828	-.497**
Strategy 1976 (3-legal matters)	.545	-.375*
Environment 1976 (1-supportiveness)	-2.509	.612***
Environment 1980 (4-turbulence)	-.505	-.060
Finances 1980 (6-expenditures per student)	2.204	.560***

GROUP	CENTROID	INSTITUTIONS CORRECTLY CLASSIFIED
Improving Institutions in Effectiveness	3.422	
Declining Institutions in Effectiveness	-4.407	100%
Stable Institutions in Effectiveness	-3.216	

\* p < .05  
 \*\* p < .01  
 \*\*\* p < .001

Acquire Resources (Table 6), when all nine dimensions are considered together, higher expenditures in the school are associated with higher overall effectiveness. This finding illustrates the tradeoffs faced by organizations when trying to increase their effectiveness. Implementing one particular action may improve effectiveness on some dimensions and inhibit effectiveness on other dimensions. Similarly, actions triggered by success in one area may not necessarily be triggered by success in other areas. In this case, success in Ability to Acquire Resources and in Professional Development and Quality of the Faculty (Table 6) may stimulate actions to reinforce those two dimensions by diverting resources from student oriented line items to faculty and institutional development line items. However, in institutions with continuing improvement in effectiveness across all nine dimensions (Table 7), such reallocation may not occur, and student expenditures would remain proportionally high. This is consistent with a series of studies on institutional finances summarized in Bowen (1980).

Institutions that improved in effectiveness also have characteristics opposite of the negatively associated variables in Table 7. That is, they are externally oriented in strategic affairs, they are not caught up in internal legalistic matters, their student body is cosmopolitan and diverse, and they have no faculty union.

On the other hand, institutions that declined in effectiveness are strategically oriented toward internal (as opposed to external) institutional affairs and legalistic matters, their students tend to be drawn from local (as opposed to regional or national) markets, and their faculty is unionized. In addition, they possess characteristics opposite to the positively associated factors in the table. They are in a hostile external environment, they spend little money per student, and they do not emphasize fund raising activities. As shown by the group centroids, stable institutions are similar to declining institutions in their characteristics.



## DISCUSSION

This study addresses and attempts to overcome many of the major weaknesses of past studies that have used organizational effectiveness as a variable. Criticism of this research has been widespread and severe, but the criticism is not without justification. Criteria of effectiveness often have been arbitrarily selected, they frequently have not been clearly associated with organizational performance, and the major factors that indicate or predict effectiveness have not been specified (see Goodman et al., [1983]; Kanter and Brinkerhoff [1981]; and Cameron and Whetten [1983] for some of the most recent criticism). In this study, the definitional boundaries of effectiveness have been clearly stated, the issue of external validity has been investigated, and the major factors that affect scores on effectiveness and changes in effectiveness over time have been identified.

The value of this study, however, is not only in the approach it takes to the assessment of organizational effectiveness, but the empirical findings resulting from the analyses have relevance for organizational theory and management practice as well. Because the organizations investigated are colleges and universities, however, generalizing to other types of organizations may be inappropriate. But because of the lack of research on effectiveness in institutions of higher education, theoretical contributions in this area are badly needed. Three propositions can be derived from these findings, and they are enumerated and discussed below. The paper then concludes with a suggestion of future research directions for organizational effectiveness investigations.

1. The most important factors associated with both static and dynamic assessments of effectiveness are environmental factors and management strategies. There are two important points to be made about this proposition, one that relates to the competing claims of the natural selection and the strategic choice theorists, and a second that relates to what variables didn't prove to be powerful predictors.

The natural selection perspective (Hannan and Freeman, 1977; Brittain and Freeman, 1980; Aldrich, 1979; McKelvey, 1982) assumes that organizations are captives of an environment, and that the environment determines the behavior and, ultimately, the effectiveness of organizations. Managers and managerial actions are considered to be largely irrelevant factors in predicting the successful performance of organizations. Moreover, organizational inertia--which is created by externally imposed constraints on organizational performance, mandates for meeting certain constituencies' needs, organizational culture and history that create norms and expectations for future performance, and structures which inhibit the implementation of some options, and so on--is argued to inhibit organizations' discretion in affecting their own long term effectiveness (Miller and Freisen, 1979). The nature of the external environment is, therefore, the critical factor to assess when studying organizational effectiveness from this perspective.

A polar opposite perspective--the strategic choice view--assumes that top managers exercise a great deal of choice and can have major impact on organizational effectiveness and long-term survival. They do this both by exerting influence on, changing, or selecting the environment in which they operate, and by changing the configuration and processes in the organization itself in order to improve performance (Child, 1972; Miles and Cameron, 1982; Barnard 1938; Miles and Snow, 1978). Organizational inertia is overcome by

the quality of executive leadership (Chandler, 1977; Miles and Cameron, 1982). The strategic emphases and choices of managers, therefore, are the critical factors to be included in assessments of organizational effectiveness from this perspective.

In this study, both environmental dimensions and strategic orientations of managers were included as factors that could potentially account for the effectiveness of institutions of higher education. Overall, both factors were found to be highly important--in fact, they are the most important variables in accounting for effectiveness--but their importance differs according to the particular dimension of effectiveness being considered and according to the year in which they were measured. Environmental dimensions tend to negatively associate with high effectiveness on dimensions relating to morale and smooth internal functioning of the institutions. Moreover, when entering measures of the 1976 environment and the 1980 environment into the analyses, the dominant relationship with effectiveness was with the 1980 environment. Institutions with decreasing organizational effectiveness over time tend to perceive and exist in a more hostile, turbulent, and complex environment than those with improving effectiveness.

Managerial strategies, on the other hand, tend to serve as contributors (i.e., positively associated factors) to high effectiveness on dimensions relating to the academic domain to the external adaptation domain. Moreover, it was the strategies in 1976 that were most strongly associated with improving effectiveness over time, suggesting that strategies were contributing to changes in effectiveness whereas environmental perceptions and relationships were a product of changes in effectiveness.

Theoretically, the fact that positive dimensions of the external environment (i.e., resource munificence, supportiveness and absence of constraints)

are not strong predictors of effectiveness suggests that environmental dimensions are largely factors that must be overcome rather than that contribute to improvement in effectiveness. It appears that institutions may be effective, in other words, in spite of their environments more than because of them--an argument contrary to the view of natural-selection theorists.

The second important point regarding this proposition relates to the variables that did not enter the regression and discriminant analyses. Several major variables that often are included in research and that are assumed to be crucial in accounting for effectiveness were not very important at all in this investigation. For example, the structure and size of the institutions, the type or classification of the institutions, the presence of a saga or special mission, and so on, did not emerge as important variables in any of the analyses. Apparently the amount of variance accounted for by these factors is dwarfed by the two major factors--environment and strategy.

2. Proactive managerial strategies and those with an external emphasis are more successful than are reactive strategies and those oriented toward internal institutional affairs. Few strategic issues in the organization literature are characterized by as much agreement as the need for entrepreneurship (or proactivity) in organizations (Van de Ven, 1983; Hedburg, Starbuck, and Nystrom, 1976; Weick, 1982). On the other hand, Cameron (1983) discovered that a model response of higher education administrators when faced with fiscal and enrollment declines is to become conservative, efficiency oriented, and reactive. An explanation for why these tendencies occurred can be found elsewhere (Cameron, 1982, 1983), but the important point is that in previous studies, most managers were found to behave contrary to conventional wisdom. The findings in this study support conventional wisdom and the prescriptions

of most organizational theorists. That is, proactivity is generally more successful than is reactivity. This finding also is consistent with Miles and Snow's (1978), Miles and Cameron's (1982), and Snow and Hrebiniak's (1981) research that found prospector organizations (completely proactive) and analyzer organizations (moderately proactive) to be more effective on almost all dimensions than defender (mostly reactive) and reactor organizations. In institutions of higher education, as in other types of organizations, not waiting for environmental events to occur before implementing strategies appears to be an important prescription for success.

In addition, strategies oriented toward influencing factors outside the institution (e.g., public service, fund raising) are associated with effectiveness whereas strategies focused only on internal affairs (e.g., budgeting, legal matters) are more generally negatively associated with effectiveness. This finding squares with the conclusions of Miles and Cameron (1982) regarding the strategic orientations that were associated with success among the firms in the U.S. tobacco industry. They identified three major types of strategies--domain defense, domain offense, and domain creation--which account for the long-term effectiveness of the tobacco firms (1950-1979). Each of these strategies is oriented toward affecting the external environment in building political slack and legitimacy, expanding markets, moving into new domains, and so on. Emphasis on internal affairs (while they cannot be completely ignored) do not account for the success of the tobacco firms in overcoming an extremely turbulent and hostile environment.

Whereas tobacco firms and institutions of higher education are dissimilar in many ways, both face similar types of environments (Cameron, 1983), and the strategies associated with effectiveness seem to be similar. That is, institutions that pursue strategies oriented toward influencing the external

environment seem to have higher effectiveness scores than do those that do not.

3. Multi-faceted managerial strategies are required in order for institutions to be effective. Institutions do not succeed by being monolithic. Managers must implement a variety of strategies with a variety of targets in order to ensure effectiveness in a variety of areas over time. In this study, several different strategic emphases were associated with different dimensions of effectiveness, suggesting that no one orientation is best. In fact, as was illustrated in comparing Table 6 and Table 7, some factors are associated with increasing effectiveness on certain dimensions and decreasing effectiveness on others. For example, success in dimensions related to the academic domain in institutions (Cameron, 1981) is most closely associated with proactive, academically oriented strategies. Success in dimensions related to the morale domain is most closely associated with proactivity in fund raising, student affairs, and academics. Success in the external adaptation domain is associated with proactivity in public relations and public service. Managers' strategies, therefore, should match the different effectiveness they have targeted for improvement.

This finding is consistent with the work of Chaffee (1983) who tried to identify the factors that differentiated institutions that successfully recovered from decline from those that continued to decline through the 1970's. She discovered, among other things, that a wide variety of strategies was required in order for institutions to turn-around and to begin to increase their effectiveness. Her summary, "colleges have a wide range of strategic moves they might make productively (p. 28)" is consistent with this study's results. Implementing strategies that are oriented toward a variety of areas

such as academics, public relations, student affairs, budgeting and financial affairs, public service, and so on, appears to be the best way to influence a variety of dimensions of organizational effectiveness. Multiple strategies are likely to enhance overall institutional performance.

Implementing multiple and diverse strategies is consistent with the distinction between "cosmopolitan" versus "local" type organizations. Cosmopolitan institutions are those with diversity in student markets and with strategies oriented toward manipulating or enacting the external environment. Local institutions, on the other hand, tend to focus on more narrow student markets, and internal or local institutional concerns (e.g., resource reallocation). Findings in Tables 5, 6, and 7 each support the notion that multiple and broad based strategies oriented toward resource acquisition and fund raising, public relations, and proactivity are among the most powerful predictors of effectiveness among institutions, whereas the opposite strategies are more often associated with low or decreasing effectiveness. Cosmopolitan institutions are not necessarily more internally heterogeneous or diverse than local institutions, nor is the difference purely a geographic or size difference. Small liberal arts institutions serving a community or county, for example, may not necessarily be "local." The difference lies more in the assumptions made regarding the nature of the environment and the relationship of the institution to it. Cosmopolitan as opposed to local institutions are more likely to seek dominance rather than submission, legitimacy rather than acquiescence, and confrontation rather than resignation. They will respond to crises more often by attempting to expand or change their niche rather than merely to protect or insulate it. Studies of other types of organizations by Miles and Snow (1978), Miles and Cameron (1982), Miller and Friesen (1982, 1983, 1984), and Cameron and Zammuto (1983) are consistent with this proposition.

## CONCLUSION

This study has attempted to investigate organizational effectiveness in such a way that the weaknesses of previous investigations were addressed. In addition, its purpose was to identify the major factors that are associated with high levels of effectiveness in colleges and universities. These findings are preliminary and exploratory, but they do suggest some directions for future research that may both enhance our understanding of organizational effectiveness could be markedly improved if the seven constraints on the definition, which were enumerated earlier, were made explicit. Those choices are made implicitly in each assessment, but their lack of conscious specification has led to ambiguity, noncumulativeness, and confusion in definitions and criteria of effectiveness in the literature. Being clear about the boundaries of organizational effectiveness in each study would help overcome those problems.

Second, more attempts at external validity should be made when assessments of effectiveness are conducted. Whereas ultimate organizational demise is usually not available as a referent, other potential indicators of long-term and short-term success may be found. The criteria selected for assessing effectiveness can then be correlated with those independent indicators.

Third, because the actual strategic actions of managers were not assessed in this study, only their strategic orientations (i.e., areas in which major decisions were made, types of policies implemented, primary orientation indicated by time spent), much more fine-grained analyses should be performed of what specific actions managers can take to preserve or enhance the effectiveness of their institutions. Now that certain major strategic variables have been identified, more fine-grained assessments of these important factors should be done. The value of an exploratory study such as this one, in fact,



is that it identifies which commonly used variables are not important in institutional performance, and those can be given less emphasis than the more important ones in future investigations.

Finally, more systematic analyses of the effectiveness of colleges and universities are badly needed. Most of the assessments up to now have been made on the basis of opinion (e.g., Barron's "The Best, Most Popular, and Most Exciting Colleges" (1982), or secondary characteristics with only marginal association with what the institution actually does (e.g., starting salaries of graduates). These nine dimensions of effectiveness used in this study are not sufficient indicators for all types of schools nor for all assessments, and attempts should be made more often to identify additional valid and reliable indicators.

FOOTNOTES

<sup>1</sup>Their alternative view calls for fine-grained research on single dependent variables such as satisfaction, productivity, accidents, and so on, "but not on OE." (Goodman, et al., 1983, p. 175.) This suggested alternative is controversial, however, as is evidenced by Brewer's (1983) reaction to it: "The demand to impose a moratorium on organizational effectiveness studies is disingenuous and easily read as a move to impede work that does not conform to the limited perception presented in the fine-grained analysis paradigm (p. 219)."

<sup>2</sup>Three examples of the 57 items on the questionnaire are provided to illustrate the descriptive nature of the questions.

"How many faculty members and administrators at this college would you say serve in the community in government, on boards or committees, as consultants, or in other capacities?"

"How many faculty members at this institution are actively engaged now in professional development activities--e.g., doing research, getting an advanced degree, etc.?"

"Approximately how many students have either dropped out or not returned because of dissatisfaction with their educational experience at this institution?"

<sup>3</sup>These five major predictors were each assessed using objective indicators (e.g., the HEGIS data base), institutional records (e.g., college catalogues), or questionnaire scales (e.g., strategies were assessed by investigating the areas in which major decisions were made, time spent, policies implemented, and primary orientation of the top administrators). For more information on variable measurement, contact the author.

<sup>4</sup>The following are definitions of the five indicators of financial health:

financial independence - the proportion of revenues from six different sources (tuition, appropriations, grants, gifts, endowment, and all others)

financial flexibility - the proportion of unrestricted revenues

financial cushion - the extent to which savings or slack can be generated

revenue drawing power - the ability to attract revenues relative to other institutions

endowment yield - the amount of endowment relative to other similar schools

Computational formulas for each of these variables are described in Collier and Patrick (1978).

<sup>5</sup>Computing rank order correlations is not appropriate in this case because high growth in enrollments is not necessarily considered to be an indicator of effectiveness, even though declining enrollments might be considered to be an indication of ineffectiveness.

<sup>6</sup>One discrepancy in these validity results is the positive correlation between Student Career Development and the enrollment referent and, at the same time, a negative correlation with the financial health referent. Institutions that tend to score highest on the Student Career Development dimension are apt to be technically or vocationally oriented schools. Those institutions have lower financial health, on the average, than comprehensive institutions, particularly on these indicators of financial health. Consequently, the negative correlation between financial health and Student Career Development may be a product of the highest scores on the effectiveness dimension being lower than

average on the financial health indicators. With this dimension, the enrollment referent may provide a more consistent test of validity.

<sup>7</sup>Because of this two stage regression procedure, the percent of variance accounted for (R<sup>2</sup>) may be exaggerated.

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